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ABSTRACT

The theoretical rationale underlying the present investigations begins with the assumption that perceptual categorization of racial groups is a prerequisite for subsequent attitude development. It is predicted that if increased perceptual similarity of other groups does indeed initiate attitude acquisition, then it follows that a decrease in similarity should conversely make it more difficult for the child to maintain negative attitudes. For the 1st study, 192 nursery school and kindergarten Ss were used. Half of the Ss were black and half white. In order to test the prediction, two-choice discrimination learning tasks were used to assess similarity. The tasks employed schematic facial drawings as discriminanda. Stimuli were presented by means of a Kendler-type apparatus with two apertures. The findings are generally in accordance with the view that racial labels may increase the perceptual similarity of another race prior to the time that children enter the first grade. The second study sought to obtain data with regard to the question of what happens to attitudes when perceptual differentiation techniques are introduced. Ss were 96 black and white children from the second and sixth grade. The two tests of major interest to this study are the Projective Prejudice Test and a Social Distance Index. On both instruments, Ss were told that testers wanted to know what kinds of things make children want to be friendly with other children. Findings include: (1) Younger children expressed more prejudice, and (2) Both distinctive labeling and stimulus predifferentiation training elicited lower prejudice scores than did a no-label control condition. (CK)

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Stimulus Predifferentiation and Modification of Children's Racial Attitudes

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The development of children's ethnic attitudes is generally acknowledged to be a deep-rooted, lengthy and extremely complex phenomenon (Proshansky, 1966). This conclusion derives from several influential theoretical accounts of attitude acquisition which have stressed such global and multifaceted determinants as: the psychological defense mechanisms of the parents (Bettelheim & Janowitz, 1950), techniques used to discipline their children, (Adorno et al, 1950), and the particular social and economic characteristics of the surrounding neighborhood (Myrdal, 1944; Clark, 1955). Although these social and cultural factors undoubtedly play a role in attitude development, the continuing theoretical focus upon such complex naturalistic parameters has generated very little in the way of attitude modification research with children. Clearly, if prejudice in children can only be changed by modifying the total social and familial milieu, the task is obviously well beyond the reach of social scientists.

In view of the urgency and magnitude of contemporary racial problems, however, it would appear that new theoretical approaches are very much needed and some of these will be discussed in this symposium. Viewpoints delineating the role of relatively simpler variables that may be potentially more susceptible to psychological manipulation would seem to be of particular value.

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The research I'm going to talk about today is part of an ongoing research program employing one such approach which focuses upon possible perceptual underpinnings of children's racial attitudes.

The theoretical rationale underlying the present investigations begins with the rather obvious assumption that perceptual categorization of racial groups is a prerequisite for subsequent attitude development. Although there is general agreement with this assumption, and considerable research attests to young children's awareness of skin-color differences (Clark & Clark, 1947; Goodman, 1964; Porter, 1971), there have been relatively few attempts to conceptualize attitude development in perceptual terms. Neither the specific details of early ethnic differentiation, nor its attitudinal consequences are well understood. Labels and other verbalizations supplied by both adults and peers undoubtedly play an important role in determining the nature of early racial awareness. There may be two distinct processes involved in such labeling, however. The correct association of distinctive racial names to people may facilitate discrimination between groups. (This acquired distinctiveness of cues may underlie early awareness expressed in doll preference tasks.) Of potentially greater significance, however, are the possible consequences associated with the continued use of the same name for all individuals categorized in the group. One anticipated consequence of this "acquired equivalence of cues" phenomenon, (Dollard & Miller, 1950) is that intra-group similarity would be increased. Learning principles suggest that it would then be easier to generalize evaluative statements to all members of the group.

Although there appears to be some anecdotal recognition of this process in jokes about the "Chinese waiter phenomenon," there is no evidence that this

actually occurs in children, or if it does, at what developmental level. The purpose of the first study I'll discuss, then, tested the prediction that differences between individuals of another race appear more similar to a child than differences within his own group.

If increased perceptual similarity of other groups does indeed facilitate initial attitude acquisition, then it follows that a decrease in similarity should conversely make it more difficult for the child to maintain negative attitudes. Thus, if the use of common labels can effectively mold initial perceptions of racial groups, any techniques which would increase perceptual individuation should subsequently affect attitudes. The second study I'll discuss today was based on this reasoning and tested the prediction that stimulus predifferentiation procedures would reduce prejudicial attitudes in children.

METHOD and Results — Study I

For this study we used 192 nursery and kindergarten Ss. The younger group had a mean age of 3 yrs., 11 mos. and the older had a mean of 5 yrs., 2 mos. Kindergarten children were drawn from an integrated, public elementary school in N.Y.C., (lower to lower-middle income level). Younger Ss came from a day care center and church-run nursery school in the same geographical area. Half of the Ss were black and half white. An equal number of boys and girls were used. For each group, half were tested by a black examiner, and half by a white E. Both Es were female in their mid-twenties.

In order to test the prediction, two-choice discrimination learning tasks were used to assess similarity. The tasks employed schematic facial

drawings as discriminanda. The stimuli were pairs of faces cut from varying shades of pink-tan, brown or green art construction paper. Within each pair the faces were alike in all respects except shade. One member was slightly lighter than the other. Shade differences within each color were judged to be equally spaced by adult observers. The green faces were included as a control for possible unfamiliarity. If other-race stimuli (brown for Caucasian and pink-tan for Negro children) were more difficult to distinguish simply because of relative unfamiliarity, then green should be equally difficult to discriminate. If, on the other hand, the predicted difficulty of discriminating other-race faces is due to the continued use of the same label, then green faces should be easier to discriminate. Ss within each age and racial group were randomly assigned to the three color conditions.

Stimuli were presented by means of a Kendler-type apparatus with two apertures, in which a marble was automatically delivered for choosing the "correct" one (which of the "moon people" to take back). The lighter face was reinforced for half of each group, and the darker for the other half. Testing was discontinued after either 5 consecutive correct responses, or 25 trials.

Results. The mean trials to criterion scores are presented in Table 1 of the first handout. Analysis of variance indicated a number of significant effects. As predicted, the effect of Treatment was significant. The mean trials to criterion for same-race, other-race and green faces was 13.16, 16.20 and 11.73, respectively. Thus, children more readily discriminate faces of their own race than faces of another race. This finding was not

simply a function of unfamiliarity since the green faces were more easily discriminated than the others. Three other main effects were significant in this analysis: (a) Race of S (Black Ss learn more quickly); (b) Age, (older Ss superior) and (c) Shade Reinforced - (Light faces easier). In addition, the interaction of Race of E X Race of S X Age was significant, indicating that at young age levels, Ss learn better with cross-raced E.

The findings are generally in accordance with the view that racial labels may increase the perceptual similarity of faces of another race prior to the time children enter the first grade.

Study Number Two sought to obtain data with regard to the question of what happens to attitudes when perceptual differentiation techniques are introduced.

METHOD - Study II

Subjects

Ss were 96 black and white children drawn from the second and sixth grade classes of the same public elementary school used in the first study. These Ss were selected on the basis of their scoring in the upper half of the frequency distribution on a battery of tests assessing racial and social attitudes. These tests were given four weeks prior to the study to 72 children at the school.

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Pre- and Post-Attitude Measures

The two tests of major interest to this study are the Projective Prejudice Test and a Social Distance Index. The Projective Prejudice Test, designed for use on this project, was composed of 24 slides depicting

ambiguous interracial situations. The S's task was to indicate which of several response alternatives was the most likely description. [Examples of slides - #1 & 2 & 3]. For example, one situation pictured a black and white boy both reaching for a trophy. Ss were asked which boy would receive the prize, and whether it was obtained because of effort or cheating. Child actors from a professional school were used for the slides. Each item yielded a score of 0, 1, or 2 depending upon degree of prejudice exhibited. Thus, the measure was based not just on choice, but on judgment of intent. Some of the situations depicted negative behavior (e.g., aggression), others positive (e.g., getting a good mark, or a prize, etc.), whereas other actions could be interpreted as either negative or positive. (Slides 2 & 3). All alternatives were read aloud to the younger group. The total range of possible scores was from 0 to 48, with the higher numbers associated with higher degrees of prejudice. Split-half reliability was .70.

The social distance measure consisted of photographs of individual black and white children. A picture of a boy and girl within each group was used. Ss were instructed to look at each slide, and indicate the amount of contact desired with each, in the form of nine alternatives ranging from "I would like to live in the same city as this child" (most distant) to "I would invite this child home to supper" (closest). The possible range was from zero to 18, with the higher numbers associated with greater prejudice. Split-half reliability on this instrument was .72.

On both instruments, Ss were told that we wanted to know what kinds of things made children want to be friendly with other children. They were told

that teachers or school personnel would not see their answers.

Experimental Procedure

Four weeks after the pretest batteries were administered, Ss were tested individually in a mobile laboratory unit in the school yard. Ss were randomly assigned to three experimental conditions: (a) Distinctive labeling training; (b) Perceptual differentiation training; and (c) No label control.

The stimuli employed in the training task were four photographs of a female mulatto model. The photographs systematically varied make-up-shade, wigs, presence or absence of glasses and facial expression [show slide #4]. White Ss viewed black faces, and black Ss viewed white faces. Labeling training consisted of associating four names (Alice, Robin, Janet and Marge) to each of four faces for forty trials. Ss were told "right" for selecting the correct label, and given the correct response if they were wrong. The perceptual differentiation group was given 40 trials in which they were asked to judge pairs of these faces as "same" or "different." The no label group viewed the four individual faces for 40 trials without names.

Following this training, all Ss received a perceptual judgment task in which they were asked to evaluate the similarity of sixteen facial pairs presented tachistoscopically for a one-second exposure. Similarity judgments were obtained by means of an apparatus with a movable lever, and Ss could indicate any degree of similarity from complete identity ("everything exactly the same") to maximum difference ("as different as they can be"). A day after the judgment tasks, Ss received the Projective Prejudice and Social Distance instruments again, this time in a small group, with the same white or black examiner. The order of administration of the tests was counterbalanced across groups.

RESULTS

On the perceptual similarity task, the total range possible for each item was from 0 to 11, with the larger numbers associated with maximal distinctiveness. The reasoning outlined suggests that training decreased the similarity of the stimuli. The means, contained in Table 2 of the second handout sheet, indicated that the distinctive label group perceived the stimuli as most distinctive, whereas the control group viewed them as least distinctive. Statistical analysis revealed that the two experimental groups differed significantly from the control ($F = 4.06$, $df = 1, 72$ $p < .05$) but not from each other. Thus, the stimulus predifferentiation manipulations appeared to elicit greater perceptual distinctiveness.

Projective Prejudice Test

In accordance with Cronbach and Furby's (1970) recommendations with regard to measuring change on tests, an analysis of variance was conducted on post-test scores only. It should be recalled that Ss were randomly assigned to treatments, and analyses of the pretest scores revealed no significant preexisting differences associated with the treatment variable.

The analyses of the post-test scores revealed that the effect of treatment was statistically significant ($F_{2,72} = 3.62$ $p < .05$). The means, presented in Table 3, indicate that the no label control group had higher post-test scores on this instrument than either of the two experimental groups. These latter groups did not differ significantly from each other. Thus, both labeling and differentiation training elicited lower prejudice scores on this projective test than the control condition.

Two other findings which emerged from this analysis were: (a) a significant age effect, indicating that the younger children expressed more prejudice, and (b) a Treatment X Age X Race of Examiner interaction. The pattern of means involved in this latter interaction suggests that the treatments were differentially effective as a function of both developmental level and the race of tester. With a white tester, the discrepancy between experimental and control groups was greatest at the older age level, whereas the effectiveness of the black examiner was more pronounced with the younger children. One possible explanation of this effect is that the presence of a black examiner may have increased both the salience and awareness of racial issues for the younger children. It should be noted that though the student body was racially integrated, the faculty was predominantly white and the young children may have been relatively unaccustomed to black authority figures.

Social Distance Test

An analysis of variance was conducted on the post-test scores of the social distance measure with regard to other-race slides (i.e., pictures of black children for white Ss, and white children for black Ss). As in the previous measure, the effect of treatment was found to be statistically significant. The means for all groups are presented in Table 4, and it can be seen that the control group, once again, emerged with the highest prejudice score. Unlike the projective instrument, however, the perceptual differentiation condition was more effective in reducing social distance scores than distinctive labeling training.

In addition to this main effect, two interactions yielded significant findings: (a) Grade X Race of Examiner, and (b) Grade X Race of Examiner X Race of Subject. The means involved in these interactions can be derived from Table 4. The pattern of the double interaction suggests a slight increase in prejudice with a white examiner and a decrease with a black examiner. When the race of the subject is taken into account, however, it can be seen that the increase with age only occurred for black children tested by a white examiner. Under all other conditions there was a decline with age.

DISCUSSION & CONCLUSIONS

The findings of the two studies presented here lend support to the view that perceptual processes are important concomitants of both attitude acquisition and maintenance.

In the first study, the major finding demonstrated that faces of another race have begun to acquire a certain perceptual equivalence for preschool children. Learning to differentiate other-race faces elicited more difficulty than same-race pairs, even though objective differences were constant. (Black children learned more quickly in general, and the effect was more pronounced in some groups than in others.)

The second study sought to assess how susceptible to change negative attitudes of grade school children were when techniques attempting to increase other-race differentiation were introduced. The most significant finding of the second study was that both distinctive labeling and stimulus

predifferentiation training elicited lower prejudice scores for children on two indices of ethnic attitudes than did a no-label control condition. Distinctive labeling and perceptual differentiation training were equally effective in reducing prejudice on a multiple-choice projective technique, whereas the perceptual differentiation training condition was most effective in reducing social distance scores. In general, the consistency of the treatment effect across all measures supports the theoretical rationale originally advanced which suggested that modifying the perceptual concomitants of ethnic attitudes would result in attitude change. Thus, the major hypothesis of the study was supported.

The interaction effects obtained, however, suggest that the effectiveness of the experimental procedures employed may be contingent upon a number of factors such as the race of the subject and the examiner, as well as developmental level. It is clear from both studies that a child's responses to racial stimuli is a complex phenomenon. Even preschool children have already undergone considerable socialization with regard to inter-group attitudes and their expression. Although the older child's greater awareness and sophistication sometimes reflected itself in lower prejudice scores, this wasn't always the case. On the projective instrument, for example, the negative items elicited lower prejudice scores with age, whereas the positive ones remained constant across age groups. Moreover, with regard to the Social Distance Index, black children tested by a white examiner exhibited an apparent increase in prejudice with age, suggesting that the social demands of the testing situation may be very different for particular subject-experimenter combinations.

It might be argued that the pre-post testing procedure sensitized all the children, and particularly the older ones, to the purpose of the study, and thus the decline in prejudice scores may merely reflect increased awareness and an attempt to please the examiner. This position, however, is not in accord with the finding that the control group changed less than the others, despite its exposure to both the pretest battery and the perceptual judgment task. In order to maintain this argument then, it would be necessary to postulate that labeling and same-different training elicited greater awareness of the experimenter's purpose than observation of the same pictures without such training. This seems a highly implausible possibility for elementary school children.

In conclusion, the results support the position that systematic application of stimulus differentiation techniques may modify ethnic attitudes. The permanence of such effects is obviously an important question which we were unfortunately unable to answer in the present study but hope to collect data on this year. The findings suggest, however, that although children's racial attitudes may be quite complex, systematic applications of learning theory to such social problems may yield beneficial outcomes.

TABLE 1

MEAN TRIALS TO CRITERION ON DISCRIMINATION LEARNING TASK

Group			Treatment		
Age	Race of S	Race of E	Same-race	Other-race	Green faces
Nursery	White	White	20.50	22.12	18.00
		Black	7.50	15.38	14.68
	Black	White	11.50	12.75	12.75
		Black	16.75	19.12	14.12
Kindergarten	White	White	17.62	17.12	11.00
		Black	17.25	19.88	7.00
	Black	White	6.62	12.50	9.88
		Black	7.50	10.75	7.00

Table 2 Mean Perceptual Similarity Scores (Range: 0-11)

GROUP	SCORE
Distinctive Labels	7.53
Perceptual Differentiation	7.18
No Labels	6.41

Table 3 Mean Post-Test Scores on Katz Projective Prejudice Measure (Range: 0-48)

TREATMENT	RACE OF EXAMINER				Combined Post-Test	Mean Decrease
	White		Black			
	Second Grade	Sixth Grade	Second Grade	Sixth Grade		
Distinctive Labels	21.63	15.50	17.25	16.75	17.78	-5.44
Perceptual Differentiation	18.75	17.75	18.00	17.88	18.10	-4.40
No Labels	18.88	20.38	24.38	18.38	20.51	-1.56

TABLE 4

MEAN POST-TEST SCORES ON SOCIAL DISTANCE INDEX

Grade	Race of S	Race of E	TREATMENT		
			Distinctive Labels	Perceptual Differentiation	No Labels
Second	Black	Black	9.25	7.75	13.25
		White	6.25	9.00	5.25
	White	Black	8.00	4.50	10.25
		White	9.75	6.25	10.50
Sixth	Black	Black	7.00	4.75	7.00
		White	9.50	11.00	10.25
	White	Black	5.75	3.50	7.50
		White	7.00	4.25	7.50